



FILE

November 30, 2001

Mr. Dave Smith  
Manager Environmental Remediation  
The Burlington Northern and Santa Fe Railway Company  
8204 East Park Meadows Drive  
Lone Tree, Colorado 80124

SUBJECT: Results of October Sampling at Libby, Montana Railyard; EMR  
Project 5539

Dear Mr. Smith,

EMR Inc., (EMR) completed soil sampling and mapping of visibly obvious asbestos at The Burlington Northern and Santa Fe Railway Company (BNSF) Libby, Montana Railyard, herein referred to as the site. Methods and procedures used for this sampling were taken from Standard Operating Procedures (SOPs) developed for the United States Environmental Protection Agency (USEPA) Region 8 asbestos investigations at Libby. The SOPs that were specific to surface soil sampling were developed from the USEPA 540-R-97-028 document entitled *Superfund Method for the Determination of Releasable Asbestos in Soils and Bulk Materials*, which is Appendix 15 of the Quality Analysis and Program Plan (QAPP) for the USEPA Libby Mine project (a copy is available at <http://www.epa.gov/unix0008/superfund/libby/libbyqap.html>).

## FIELD WORK

### Surface Soil Sampling

EMR established a systematic grid sampling design for collection of soil samples at the Libby Railyard. A 100-foot grid interval was used. The center of each grid cell was located by GPS. The grid, as well as the main line, associated tracks, buildings and roads, are shown on the attached Figures.

During sampling, areas with visible vermiculite or biotite were mapped for placement on the CADD map. Samples from these areas will not be collected. These areas were flagged with surveyors red whiskers.

Within each grid cell five samples were collected; one sample from the center of the grid cell and one sample from the center of each quadrant. The cells were located so that discrete samples along the main line were collected. A portion of each discrete sample was used to create a composite sample from each cell. A total of 22 grid cells were established; a total of 22 composite samples were made from 110 discrete samples. At each discrete sample location, a metal nail with yellow plastic flagging was driven into the ground.

All soil samples were submitted to EMSL on a "hold" basis pending decisions on laboratory analysis.

Soil samples were collected with a stainless steel trowel extending from the surface to approximately four inches below grade. Samples were placed in a glass jar and labelled. The following SOPs were used for the soil sampling:

- Surface soil sampling log (Appendix 8 to the QAPP);
- Surface soil sampling (Appendix 3, Section 5.2.3 to the QAPP);
- Photo documentation of sampling (Appendix 6 to the QAPP).

Sample analysis will be by others.

Copies of the soil sample logs, photo documentation and chain-of-custody forms have been submitted under separate cover.

EMR appreciates this opportunity to be of service. If you have questions or comments, please call Dave Welch or me at (800) 275-3516.

Very Truly Yours,

A handwritten signature in black ink, appearing to read "Don Clabaugh", with a stylized flourish at the end.

Don Clabaugh, CPG, PE  
Principal Engineer


Attachment

LEGEND:

— x — x — x — FENCE

```
++++++1+++++++ RAILROAD TRACKS WITH ASSIGNED
NUMBER
```

+++++M+++++ MAIN LINE RAILROAD TRACKS  
{3-4" DIAMETER QUARTZITE  
BALLAST AT LEAST 1-FOOT DEEP




PARKED TRAIN AT TIME OF INSPECTION

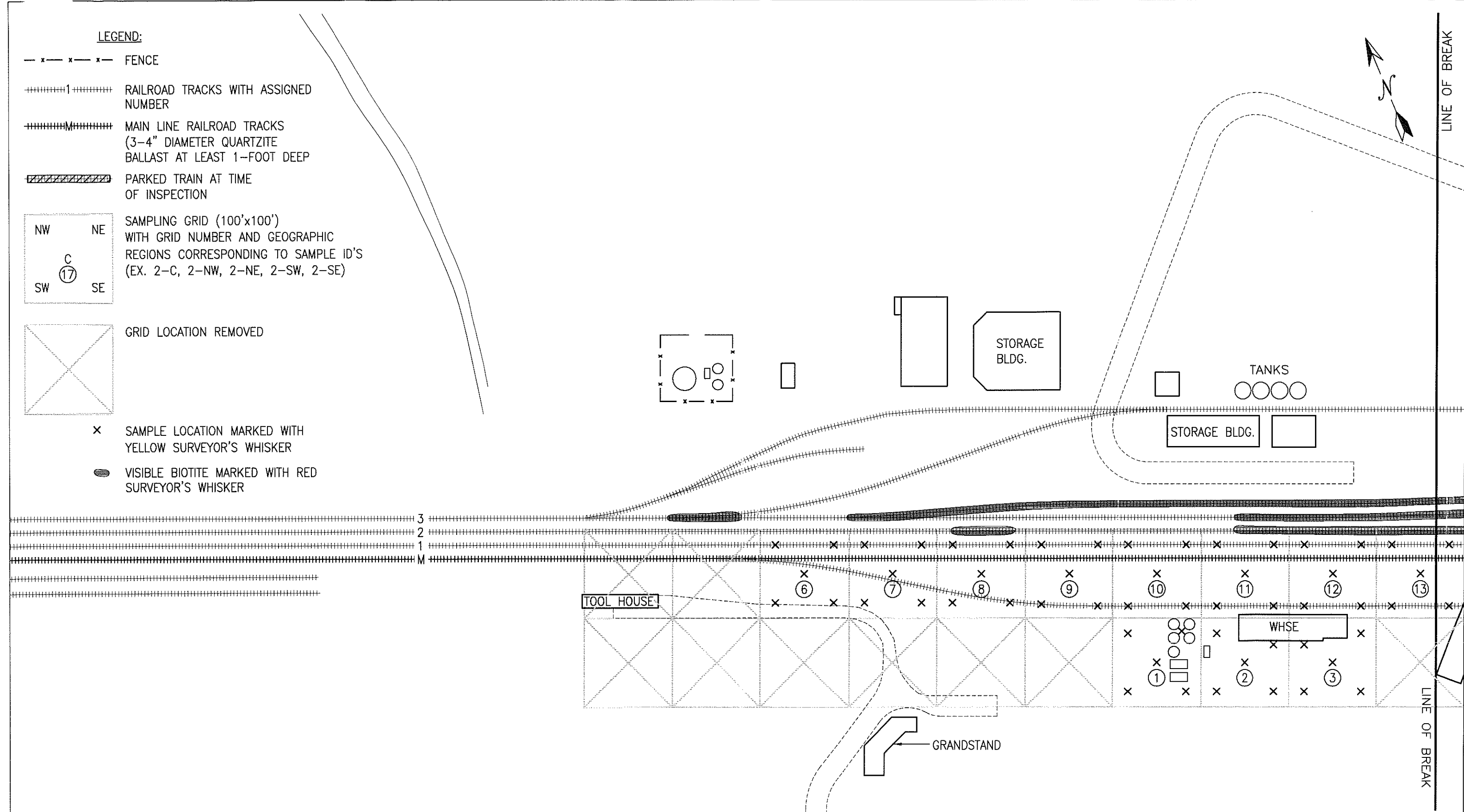
NW NE  
C  
(17)  
SAMPLING GRID (100'x100')  
WITH GRID NUMBER AND GEOGRAPHIC  
REGIONS CORRESPONDING TO SAMPLE ID'S  
(EX. 2-C, 2-NW, 2-NE, 2-SW, 2-SE)

SW (17) SE

GRID LOCATION REMOVED

X SAMPLE LOCATION MARKED WITH  
YELLOW SURVEYOR'S WHISKER

 VISIBLE BIOTITE MARKED WITH RED  
SURVEYOR'S WHISKER



— GRANDSTAND

STORAGE  
BLDG.

STORAGE BLDG.

TANKS

WHSE

LINE OF BREAK

LINE OF BREAK



WEST AREA  
FIELD SAMPLING PLAN/  
MAP OF VISIBLE BIOTITE  
BNSF RAIL YARD  
LIBBY, MT.

0 100  
APPROXIMATE SCALE IN FEET

BNSF RAILWAY STATION MAP  
LIBBY, MT.

Drawn by	: Q.D.D.
Checked By	: G.M.C.
Project No.	: 5539.1
File Name	: 5539.DWG
Revision No.	: 1
Date	: 10/15/01
Scale	: 1"=100'-0"

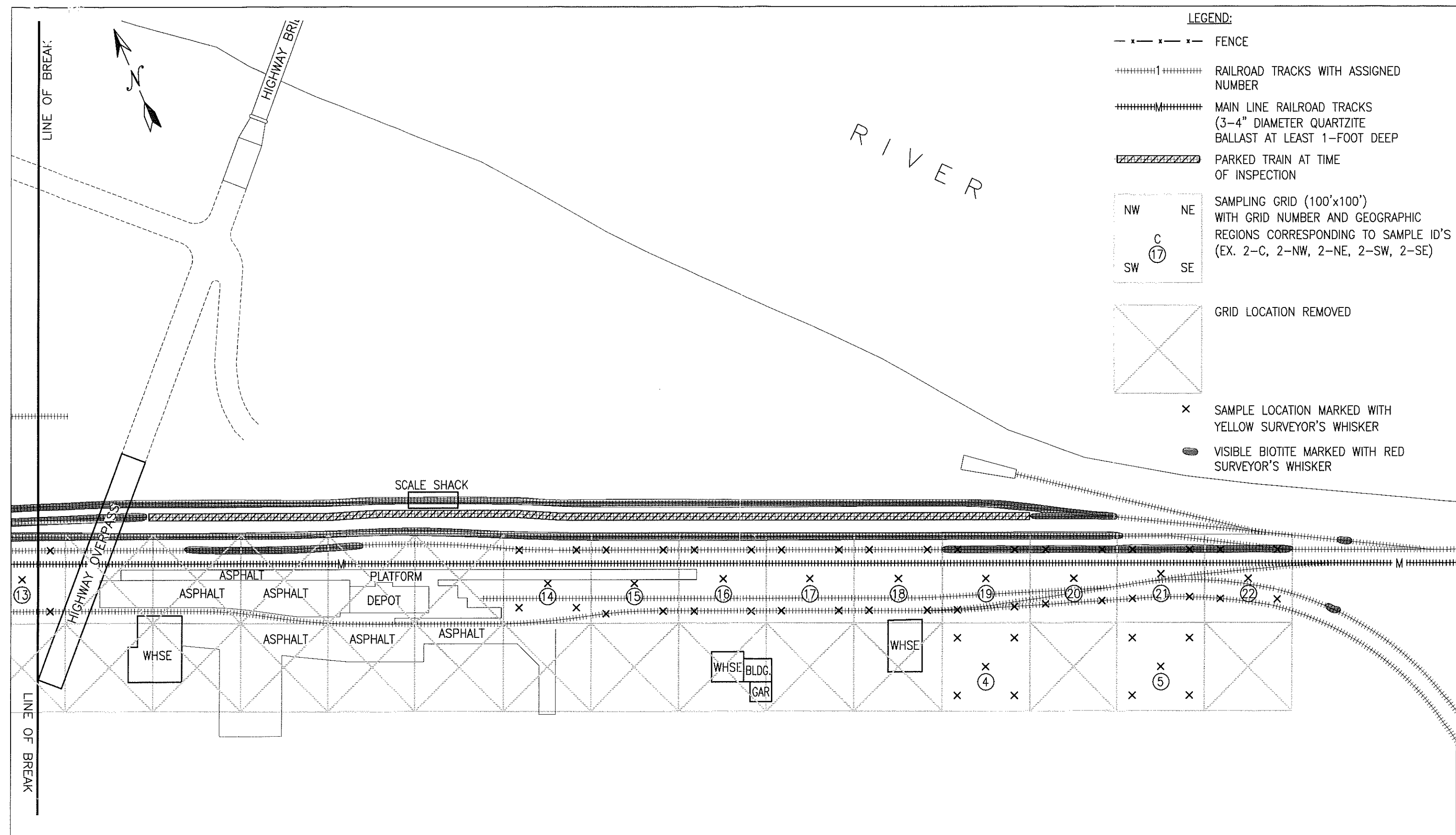
FIGURE  
2

LEGEND:

- x — x — x — FENCE
- +++++1+++++ RAILROAD TRACKS WITH ASSIGNED NUMBER
- +++++M+++++ MAIN LINE RAILROAD TRACKS (3-4" DIAMETER QUARTZITE BALLAST AT LEAST 1-FOOT DEEP)
- ||||| PARKED TRAIN AT TIME OF INSPECTION
- |         |    |
|---------|----|
| NW      | NE |
| C<br>17 |    |
| SW      | SE |

 SAMPLING GRID (100'x100') WITH GRID NUMBER AND GEOGRAPHIC REGIONS CORRESPONDING TO SAMPLE ID'S (EX. 2-C, 2-NW, 2-NE, 2-SW, 2-SE)
- |   |  |
|---|--|
| X |  |
|---|--|

 GRID LOCATION REMOVED
- x SAMPLE LOCATION MARKED WITH YELLOW SURVEYOR'S WHISKER
- VISIBLE BIOTITE MARKED WITH RED SURVEYOR'S WHISKER



EAST AREA  
FIELD SAMPLING PLAN/  
MAP OF VISIBLE BIOTITE  
BNSF RAIL YARD  
LIBBY, MT.



BNSF RAILWAY STATION MAP  
LIBBY, MT.

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FIGURE  
1